UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,238	12/10/2001	Prathima Agrawal	APP 1412-US	4496

			EXAMINER
9941	7590	09/21/2005	HARPER, KEVIN C

TELCORDIA TECHNOLOGIES, INC.
ONE TELCORDIA DRIVE 5G116
PISCATAWAY, NJ 08854-4157

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/016,238	AGARWAL ET AL
	Examiner	Art Unit	
	Kevin C. Harper	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
   Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413).
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Drawings

1.   The drawings are objected to because fig. 1, one of items 12-17, fig. 2, item 24, and fig. 7, item 46 should have descriptive text labels for clarity (37 CFR 1.83(a); MPEP 808.02(b), FP 6.22, Examiner Note 1). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2.   Claim 9 is objected to because "such last-mentioned time slot" should be --said time slot associated with said intersection-- for clarity.

3.   Claims 13-20 are objected to because in claim 13, "means defining a matrix" should be --means for defining a matrix--.

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 7 and 9-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 6 of copending Application No. 10/016,099 in view of Kwok et al. (US 2003/0016651).

4.   Regarding claims 1-3, 7 and 9-12, claim 1 and 6 of the '099 application each recites a method for communicating packets over transmission paths for Bluetooth elements having a hopping patterns. However, claims 1 and 6 of the '099 application each additionally recite predicting a future time slot of coincidence and muting the packets sent during the time slot, among other limitations. In removing these additional steps, the scope of the claim is merely broadened by eliminating elements or their functions. It has been held that omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ 184 (CCPA). Also note Ex parte Rainu, 168 USPQ 365 (Bd. App. 1969) (omission of a reference element whose function is not needed would be obvious to one skilled in the art). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to not recite the additional limitations of the '099 application.

5.   Further, claims 1 and 6 of the '099 application each does not disclose creating a matrix and scanning the matrix to detect a collision and limitations of dependent claims 2-3, 7 and 9-12. Kwok discloses a method for communicating data over several paths used by Bluetooth elements (fig. 1). The method comprises creating a matrix having coordinates of future time slots and frequencies of hopping patterns of activated paths during the time slots (fig. 9; para. 56) and scanning the time slots of the matrix to detect the occurrence of identical frequency hops at an intersection of the scanned time slots and at least a pair of segments of frequency hopping patterns (fig. 3; fig. 5, step 502-504; para. 54, lines 8-12), where the occurrence is indicative of a collision in the time slot associated with the intersection (para. 54, lines 15). The time slots of the channel hopping patterns are synchronized (figs. 3-4 and 9; fig. 5, step 504). The data transmission is altered during the affected time slot (figs. 3-4; fig. 5, step 510; para. 54, last six lines). A scan is incremented by one time slot or an integer N time slots for each scan does not detect identical frequency hops (para. 54, lines 3-8) and the frequency coordinates are updated (para. 54, lines 14-15). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to recite creating a matrix and determining collision in the matrix in the '099 application in order to reduce the chance of data collisions (Kwok, para. 15).

6.   Regarding claims 13-16, 19 and 21-24, claims 11 and 14 of the '099 application recite a terminal and an apparatus, respectively, for communicating using Bluetooth via connections having separate hopping patterns. However, claims 11 and 14 of the '099 application additionally recite a means for predicting a future time slot of coincidence and muting the packets sent during the time slot, among other limitations. In removing these additional features, the scope of the claim is merely broadened by eliminating elements and their functions. It has been held that omission of an element and its function is an obvious expedient if the remaining elements perform the same

function as before. In re Karlson, 136 USPQ 184 (CCPA). Also note Ex parte Rainu, 168 USPQ

365 (Bd. App. 1969) (omission of a reference element whose function is not needed would be

obvious to one skilled in the art). Therefore, it would have been obvious to one skilled in the art at

the time the invention was made to not recite the additional limitations of the '099 application.

7.   Further, claims 11 and 14 of the '099 application do not recite the limitations of the terminal

and circuit of claims 13-16, 19 and 21-24. Kwok discloses a terminal (fig. 6) having a circuit (fig.

6) for use in a system for effecting communication over several separate transmission paths to

connect Bluetooth elements (fig. 1), each path having independent channel hopping patterns in .

discrete time slots (figs. 3-4) upon being activated by a connection between the elements (para. 14,

lines 4-6). The circuit predicts the occurrence of a future collision of the frequency hops of the

channel hopping patterns (fig. 5, step 506). The circuit comprises a means for defining a matrix

having coordinates of future time slots and frequencies of hopping patterns activated paths during

the time slots (fig. 9; para. 56) and a means for scanning the time slots of the matrix to detect the

occurrence of identical frequency hops at an intersection of the scanned time slots and at least a pair

of segments of frequency hopping patterns (fig. 3; fig. 5, step 502-504; para. 54, lines 8-12) where

the occurrence is indicative of a collision in the time slot associated with the intersection (para. 54,

lines 15).

8.   In Kwok, the terminal comprises several radio interfaces (items 614-620), a controller (item

602) for using clock counts and receiving Bluetooth addresses of radio modules (figs. 3-4; para. 7,

lines 1-3; para. 17, lines 6-7), a prediction circuit (fig. 6, item 650) for generating markers indicative

of frequency collisions on the channel (para. 36, lines 1-5) where the prediction circuit is coupled to

the controller, and an adjustment circuit (item 650) coupled to the prediction circuit, to direct the

controller to alter transmission on the channel from the several radio interfaces (para. 54, last 15

lines). The terminal includes a means for defining a means for defining a matrix having coordinates

of future time slots and frequencies of hopping patterns activated paths during the time slots (fig. 9;

para. 56) and a means for scanning the time slots of the matrix to detect the occurrence of identical

frequency hops at an intersection of the scanned time slots and at least a pair of segments of

frequency hopping patterns (fig. 3; fig. 5, step 502-504; para. 54, lines 8-12) where the occurrence

is indicative of a collision in the time slot associated with the intersection (para. 54, lines 15). The

time slots of the channel hopping patterns are synchronized (figs. 3-4 and 9; fig. 5, step 504). The

scanning means is configured for repetitive scans by incrementing the scan by one time slot or an

integer N time slots for each scan does not detect identical frequency hops (para. 54, lines 3-8) and

the frequency coordinates are updated (para. 54, lines 14-15). Therefore, it would have been

obvious to one skilled in the art at the time the invention was made to recite a means for creating a

matrix and determining collision in the matrix in the '099 application in order to reduce the chance

of data collisions (Kwok, para. 15).

This is a <u>provisional</u> obviousness-type double patenting rejection.

Claims 5-6 and 17-18 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claim 1 and 6, or 9 and 14 of

copending Application No. 10/016, 099in view of Kwok et al., as applied to claims 1 or 13 above,

in further view of Boger (US 2002/0159401).

9.   Regarding claims 5-6 and 17-18, claims 1, 6, 9 and 14 of the '099 application in view of

Kwok do not recite updating the matrix to reflect an inactive path that is activated or an activated

path that is deactivated. Boger discloses a connection table that adds activated connection and

removes deactivated connections (para. 22, lines 1-2 and 5-7). Therefore, it would have been

obvious to one skilled in the art at the time the invention was made to recite updating the matrix for

activated or deactivated paths in the '099 application in order to reflect the current topology or

status of the network (Kwok, para. 14, lines 4-6; Boger, para. 22, lines 1-8).

Claims 8 and 20 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claim 1 and 6, or 9 and 14 of

copending Application No. 10/016, 099 in view of Kwok et al, as applied to claims 1 or 13 above,

in further view of Beasley et al. (US 2002/0187749).

10.   Regarding claims 8 and 20, claims 1, 6 9 and 14 of the '099 application in view of Kwok do

not recite that the channel matrix has an activated path offset. Beasley discloses a table containing

an activated path offset (fig. 7; note: offset for B2). Therefore, it would have been obvious to one

skilled in the art at the time the invention was made to recite a matrix with a channel offset in the

'099 application in order to accurately reflect the state of the communications network (Beasley,

para. 75).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7, 9-16, 19 and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated

by Kwok et al. (US 2003/0016651).

11.　Regarding claim 1, Kwok discloses a method for communicating data over several paths used by Bluetooth elements (fig. 1). The method comprises creating a matrix having coordinates of future time slots and frequencies of hopping patterns of activated paths during the time slots (fig. 9; para. 56) and scanning the time slots of the matrix to detect the occurrence of identical frequency hops at an intersection of the scanned time slots and at least a pair of segments of frequency hopping patterns (fig. 3; fig. 5, step 502-504; para. 54, lines 8-12) where the occurrence is indicative of a collision in the time slot associated with the intersection (para. 54, lines 15).

12.　Regarding claim 13, Kwok discloses a circuit (fig. 6, item 650) for using in a system for effecting communication over several separate transmission paths to connect Bluetooth elements (fig. 1), each path having independent channel hopping patterns in discrete time slots (figs. 3-4) upon being activated by a connection between the elements (para. 14, lines 4-6). The circuit predicts the occurrence of a future collision of the frequency hops of the channel hopping patterns fig. 5, step 506). The circuit comprises a means for defining a matrix having coordinates of future time slots and frequencies of hopping patterns activated paths during the time slots (fig. 9; para. 56) and a means for scanning the time slots of the matrix to detect the occurrence of identical frequency hops at an intersection of the scanned time slots and at least a pair of segments of frequency hopping patterns (fig. 3; fig. 5, step 502-504; para. 54, lines 8-12), where the occurrence is indicative of a collision in the time slot associated with the intersection (para. 54, lines 15).

13.　Regarding claim 21, Kwok discloses a terminal (fig. 6) for communicating data on a channel in accordance with Bluetooth (fig. 1). The terminal comprises several radio interfaces (items 614-620), a controller (item 602) for using clock counts and receiving Bluetooth addresses of radio modules (figs. 3-4; para. 7, lines 1-3; para. 17, lines 6-7), a prediction circuit (fig. 6, item 650) for generating markers indicative of frequency collisions on the channel (para. 36, lines 1-5) where the

prediction circuit is coupled to the controller, and an adjustment circuit (item 650) coupled to the

prediction circuit, to direct the controller to alter transmission on the channel from the several radio

interfaces (para. 54, last 15 lines).

14.   Regarding claim 22, the terminal includes a means for defining a means for defining a

matrix having coordinates of future time slots and frequencies of hopping patterns activated paths

during the time slots (fig. 9; para. 56) and a means for scanning the time slots of the matrix to detect

the occurrence of identical frequency hops at an intersection of the scanned time slots and at least a

pair of segments of frequency hopping patterns (fig. 3; fig. 5, step 502-504; para. 54, lines 8-12)

where the occurrence is indicative of a collision in the time slot associated with the intersection

(para. 54, lines 15).

15.   Regarding claims 7 and 19, the time slots of the channel hopping patterns are synchronized

(figs. 3-4 and 9; fig. 5, step 504).

16.   Regarding claim 9, the data transmission is altered during the affected time slot (figs. 3-4;

fig. 5, step 510; para. 54, last six lines).

17.   Regarding claims 2-3, 10-11, 14-16 and 23, the scanning means is configured for repetitive

scans by incrementing the scan by one time slot or an integer N time slots for each scan does not

detect identical frequency hops (para. 54, lines 3-8) and the frequency coordinates are updated

(para. 54, lines 14-15).

18.   Regarding claims 4 and 12, each frequency coordinate is updated (para. 54, lines 15-18).

19.   Regarding claim 24, the limitations of this claim have been address in the rejection of claims

21 and 22 above, and additionally, the radio modules have separate hopping patterns (figs. 3-4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims

under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and

invention dates of each claim that was not commonly owned at the time a later invention was made

in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35

U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-6 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwok

et al. (US 2003/0016651) in view of Boger (US 2002/0159401).

20.   Regarding claims 5-6 and 17-18, Kwok discloses a table of active transmissions (figs. 3-4

and 9). However, Kwok does not disclose updating the matrix to reflect an inactive path that is

activated or an activated path that is deactivated. Boger discloses a connection table that adds

activated connections and removes deactivated connections (para. 22, lines 1-2 and 5-7).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to

update the matrix for activated or deactivated paths in the invention of Kwok in order to reflect the

current topology or status of the network (Kwok, para. 14, lines 4-6; Boger, para. 22, lines 1-8).

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwok et al.

(US 2003/0016651) in view of Beasley et al. (US 2002/0187749).

21.   Regarding claims 8 and 20, Kwok discloses a transmission matrix (figs. 3-4 and 9).

However, Kwok does not disclose that the channel matrix has an activated path offset. Beasley

discloses a table containing an activated path offset (fig. 7; note: offset for B2). Therefore, it would

have been obvious to one skilled in the art at the time the invention was made to have a matrix with

a channel offset in the invention of Kwok in order to accurately reflect the state of the

communications network (Beasley, para. 75).

Conclusion

22.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Souissi et al. (US 2002/0075941) discloses a collision avoidance scheme based on a

transmission matrix (fig. 3).

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can

normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Seema S. Rao, can be reached at 571-272-3174. The centralized fax number for the Patent Office is

571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-

3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications associated with a customer number is available through Private PAIR only. For more

information about the PAIR system, see portal.uspto.gov. Should you have questions on access to

the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin C. Harper

September 19, 2005